

Kawneer

WINDOWS • DOORS
ARCHITECTURAL
METAL WORK

KAWNEER PRODUCTS

Architectural Metal Work in Aluminum, Bronze, Nickel Silver, Stainless Steel, Monel Metal, Cast and Wrought Iron

PRODUCTS DESCRIBED IN THIS CATALOG

(See Separate Catalog for Kawneer Store Front Construction)

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* Light Sealair Weight-Hung Windows (Residential) .	2, 3, 4
* Medium Sealair Weight-Hung Windows (Commercial) .	5
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* Light Sealair Casement Windows	7
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FOREWORD

The Kawneer Company has been manufacturing display windows for over thirty years and is the pioneer in the use of rustless metal for store front construction. Following the development in store fronts it was only natural that The Kawneer Company should manufacture other types of rustless metal windows and doors.

For many years The Kawneer Company has been actively manufacturing rustless metal windows for commercial buildings, residences, ocean liners, U. S. battle ships, light houses, and many other uses.

Kawneer windows are made only of rustless metals—primarily bronze and aluminum fabricated with extruded shapes. The Kawneer Sealair Windows are particularly famous for their fine workmanship as well as the extremely low

infiltration. The Kawneer patented weathering interlocks are the secret of their low infiltration. It is only by manufacturing durable weather-tight windows that The Kawneer Company has furnished their windows for many of the finer buildings, residences, and over forty ocean going vessels. The standard Kawneer windows are light, medium and heavy weight double hung windows and the light and heavy casement window. We are, however, prepared to build windows for any special conditions that may arise.

The Kawneer Company gladly cooperates with architects in the solution of their problems and is always ready to work with them in connection with any form of architectural metal work.

THE
Kawneer
COMPANY

NILES MICHIGAN

A. I. A. FILE MATERIAL AVAILABLE • Complete Full Size Details and Installation Instructions on Light Sealair and Medium Sealair Windows • Illustrated 8-page Consumer Booklet on Light Sealair Windows • "Better Windows," an illustrated 32-page booklet on all Sealair Windows • 8-page booklet on Kawneer Rustless Metal Doors • Architectural Metals, a 24-page Book of Basic Data on Metals and on Kawneer Architectural Metal Work. Any or all of these pieces will be sent on request.

★ LIGHT SEALAIR WEIGHT-HUNG WINDOWS

In Aluminum or Bronze

The Light Sealair Window is a compact, double hung window, sturdily built of solid aluminum or bronze, designed and priced for use in the average home. Brings new permanence and upkeep economy. For new or modernized homes. Special Kawneer screens and storm sash are available.

● **A COMPLETE UNIT**—Assembled at the factory, ready for quick installation in new or old homes. Upper and lower sash are glazed and installed in the frame on integral weather-strip guides; hardware is attached; pulleys and weights included.

● **SIMPLE CONSTRUCTION**—Sash are counterbalanced by the use of pulleys, sash cord, and weights with amazing compactness and precision. Weights and pulleys are easily accessible and sash easily removed for local glazing in case of glass breakage.

● **EASY INSTALLATION**—The complete Light Sealair Window can be installed by one man in an hour's time.

● **EASY OPERATION**—Properly installed, it offers easy, dependable operation at all times. Made of rustless metals. Unaffected by atmospheric conditions.

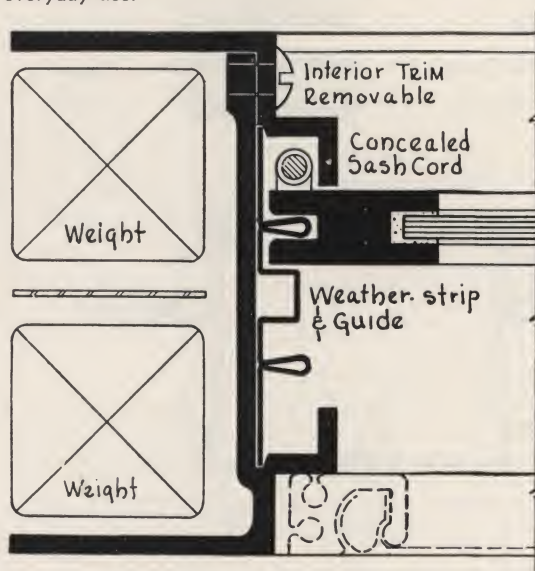
● **MINIMUM MAINTENANCE COST**—Requires no painting, no refinishing—will not swell, shrink, rust, flake off, stick, decay, or rot out.

● **WEATHERTIGHT CONSTRUCTION**—Accurate manufacture and interlocking members make Light Sealair dustproof, weather-proof, and rattleproof.

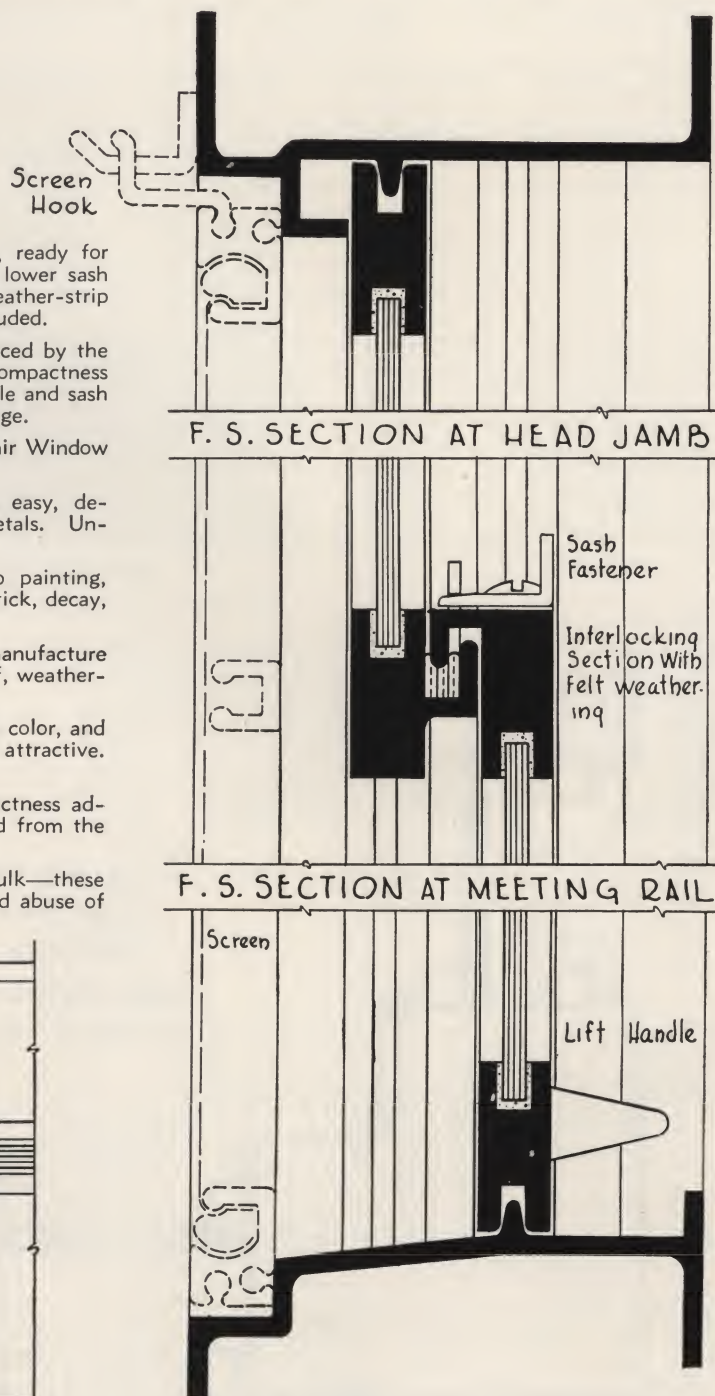
● **MODERN BEAUTY**—Extreme simplicity, appealing color, and unusual compactness make this new window unusually attractive. Lights may be divided as desired.

● **ADMITS MORE DAYLIGHT**—Light Sealair compactness admits about 15% more daylight. Mullions are reduced from the usual 10-in. to only 4 $\frac{1}{8}$ -in.

● **DURABLE**—Great strength is obtained without bulk—these windows are sturdily built to withstand all the use and abuse of hard everyday use.



F. S. PLAN AT JAMB



F. S. SECTION AT SILL
SIMPLY DESIGNED FOR STRIKING BEAUTY, EASY ACTION AND LASTING SERVICE AND ECONOMY

LIGHT SEALAIR WEIGHT-HUNG WINDOWS

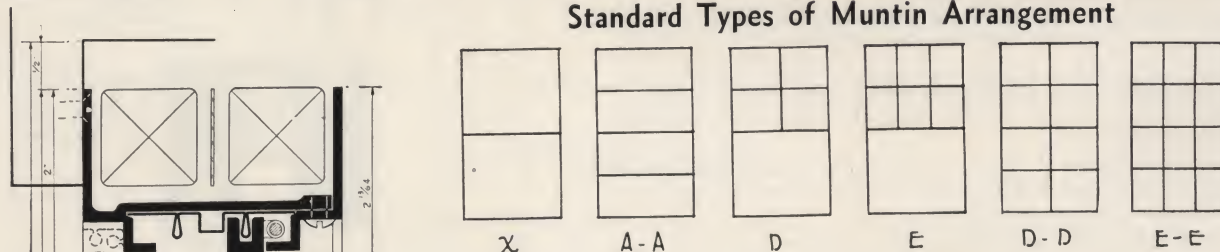
Typical Frame Sizes

Light Sealair Windows are made in even glass sizes within the limits of these sizes

Glass sizes, in.	Single Window Frame sizes, in.	Twin Window Frame sizes, in.	Triple Window Frame sizes, in.
18x16—2 Lt.	22x35 1/2	44 7/8 x35 1/2	66 7/8 x35 1/2
18x20—2 Lt.	22x43 1/2	44 7/8 x43 1/2	66 7/8 x43 1/2
20x16—2 Lt.	24x35 1/2	48 7/8 x35 1/2	72 7/8 x35 1/2
20x20—2 Lt.	24x43 1/2	48 7/8 x43 1/2	72 7/8 x43 1/2
22x16—2 Lt.	26x35 1/2	52 7/8 x35 1/2	78 7/8 x35 1/2
24x16—2 Lt.	28x35 1/2	56 7/8 x35 1/2	84 7/8 x35 1/2
24x24—2 Lt.	28x51 1/2	56 7/8 x51 1/2	84 7/8 x51 1/2
26x16—2 Lt.	30x35 1/2	60 7/8 x35 1/2	90 7/8 x35 1/2
26x26—2 Lt.	30x55 1/2	60 7/8 x55 1/2	90 7/8 x55 1/2
28x16—2 Lt.	32x35 1/2	64 7/8 x35 1/2	96 7/8 x35 1/2
28x26—2 Lt.	32x55 1/2	64 7/8 x55 1/2	96 7/8 x55 1/2
28x28—2 Lt.	32x59 1/2	64 7/8 x59 1/2	96 7/8 x59 1/2
30x16—2 Lt.	34x35 1/2	68 7/8 x35 1/2	102 7/8 x35 1/2
30x24—2 Lt.	34x51 1/2	68 7/8 x51 1/2	102 7/8 x51 1/2
30x30—2 Lt.	34x63 1/2	68 7/8 x63 1/2	102 7/8 x63 1/2



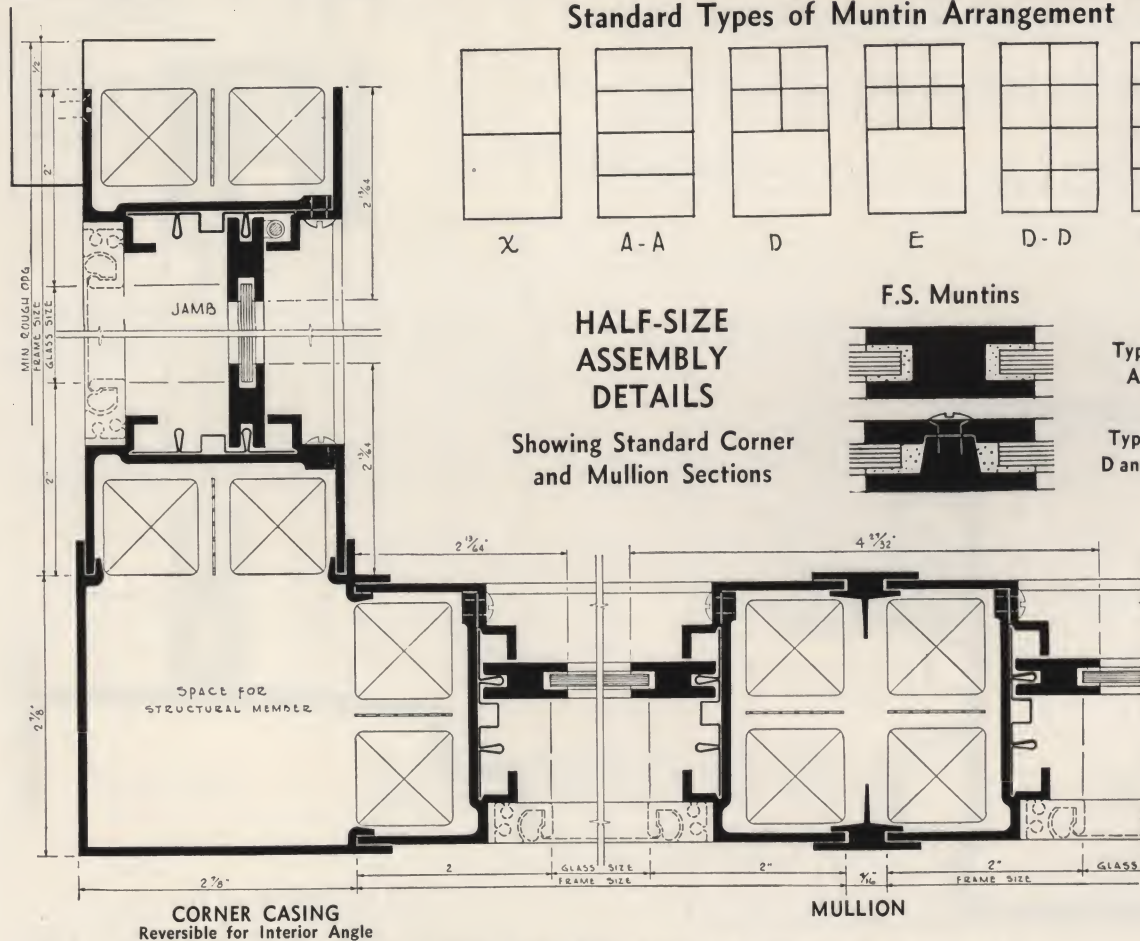
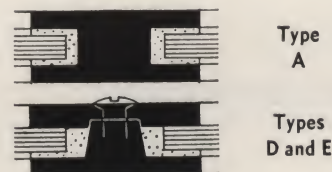
Standard Types of Muntin Arrangement



HALF-SIZE ASSEMBLY DETAILS

Showing Standard Corner and Mullion Sections

F.S. Muntins



FULL SIZE LIGHT SEALAIR DETAILS SENT ON REQUEST

Specifications

● **DOUBLE HUNG WINDOWS**—Residential Double Hung Windows shall be Light Sealair Weight-Hung Windows as manufactured by The Kawneer Company, Niles, Michigan.

● **MATERIALS**—All extruded shapes of aluminum or bronze shall be formed by a reliable manufacturer of extruded metals. The metal used shall be of the best standard commercial alloy for the purpose intended. The weatherstripping members of the side jambs shall be specially formed stainless steel.

● **CONSTRUCTION**—The sections forming the window frames and sash shall be accurately coped and joined at corners and abutting intersections. All sash are to be readily removable by removing inside moulding trim on each of the side jamb sections. Pulleys, weights, and sash cords shall be accessible for adjustment without removing the window from the opening. Sash cords shall be concealed by the special formed section of the side jamb.

● **WEATHERING**—Sash rails

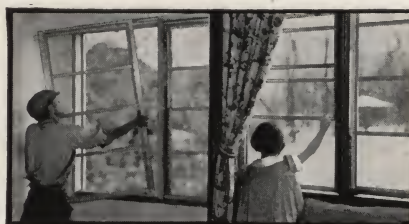
at sill, jambs and head shall be designed to form an interlocking contact against the frame members. Weathering at meeting rails shall be metal to felt. Felt shall be all wool, specially prepared to give a maximum resiliency and treated to prevent deterioration due to vermin, moisture or exposure.

● **GLAZING**—Windows shall be glazed by the manufacturer with either "A" quality window glass or 1/8-in. plate glass.

● **HARDWARE**—Hardware shall be finished to match window and shall consist of appropriate lifts and meeting rail lock.

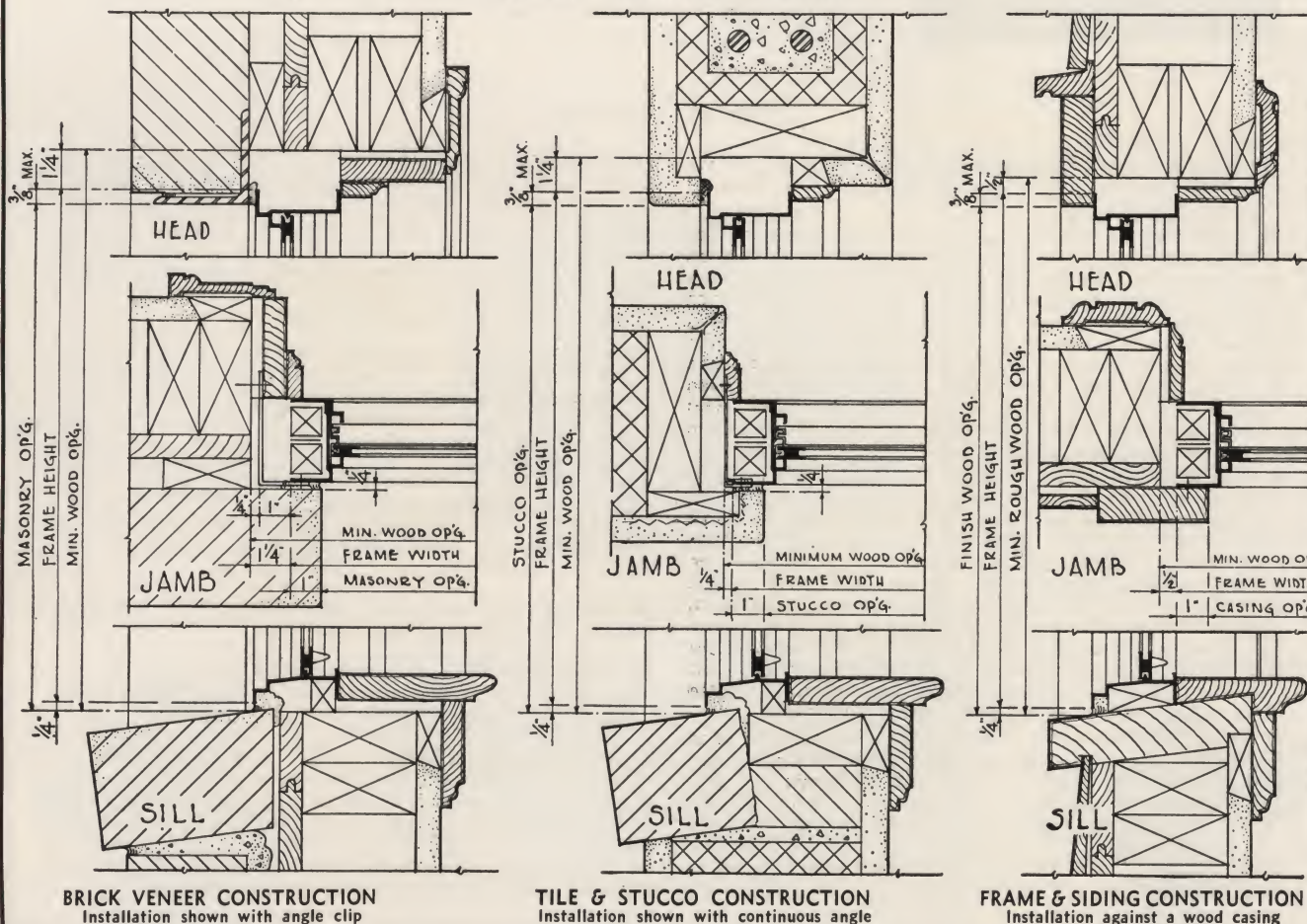
● **FINISH**—All frames and sash shall have a fine satin finish unless otherwise specified.

● **INSTALLATION**—The windows shall be installed in the proper opening immediately after plastering. Before leaving factory, windows shall be coated with a protective coating as a precaution against damage to finish in transit and during erection. After installation, this protective coating shall be removed with any standard solvent.



SIMPLE INSTALLATION EFFICIENT OPERATION

Typical Installation Details



★ HEAVY SEALAIR WEIGHT-HUNG WINDOWS

In Aluminum or Bronze

Kawneer Sealair Double Hung Windows are particularly adapted for use on buildings where minimum upkeep and maintenance are essential features.

Sealair windows are made of non-ferrous metals, either bronze or aluminum. Both of these metals will last indefinitely and assure the owners of minimum upkeep for the life of the building. Kawneer Sealair Windows are sturdily constructed to withstand strains to which they will be subjected in daily use and to withstand the elements. Patented double guide type stainless steel weather-strips at jambs assure protection from the weather and also serve a second purpose in that they facilitate the ease of operation without binding, sticking or rattling.

Sealair windows allow only a minimum of air infiltration as tests have shown. Engineer's report shows that our double hung Sealair construction allows the entrance of only .726 cubic feet per minute per foot of perimeter which is almost negligible.

The hardware on Sealair windows is of extremely sturdy design and of ample strength for the duties required.

★ **MEDIUM SEALAIR WEIGHT-HUNG WINDOWS.** Another fine commercial window similar to Light Sealair, but 30% heavier. For openings up to 4 ft. in width. Write for details and specifications.

Specifications

● **DOUBLE HUNG WINDOWS** shall be Kawneer Heavy Sealair Weight-Hung Windows as made by The Kawneer Co., Niles, Michigan.

● **MATERIALS**—The bronze and aluminum metal used shall be of standard commercial alloys and the best that can be obtained for the purpose intended. All members shall be solid extruded one-piece sections with all faces, sections and arrises true and in perfect alignment with each other. Concealed members shall be steel or iron plate and zinc coated. Cover plates of 20-gauge metal shall be attached to the backs of jambs and heads. Parting strips between weights shall be 24-gauge metal. The Contractor shall submit with his estimate a drawing showing the minimum size of members for each opening.

● **CONSTRUCTION**—The sections forming the window frames shall be accurately coped or mitered at corners and at abutting intersections; then the joints shall be either welded solid along the entire line of contact, or they shall be milled to a hair line joint, tenoned and riveted and then welded on the unexposed side. Frames shall have outside staff beads and shall give ready access to the weights, pulleys and chains for repairs or replacements. Frames with weightless mullions shall have concealed overhead pulleys and chains. Sash members shall be coped or mitered and welded at corners. Surplus metal at welds shall be dressed flush and smooth on all exposed and contact surfaces.

● **WEATHERING**—Sash rails at sill, jambs and head shall be designed to form a double contact against frame members. Contact members on jambs shall be formed of stainless steel weather-stripping. Contacts at sill and head shall be formed with ribs extruded as an integral part of the sill and head members. The meeting rails of sliding sash shall interlock and form a double contact when closed, with top members forming a continuous pull.

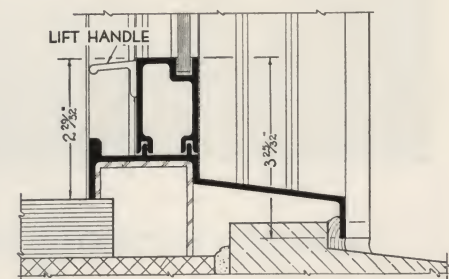
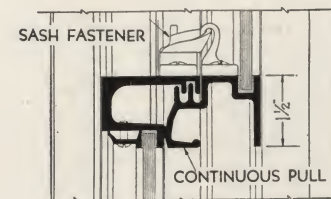
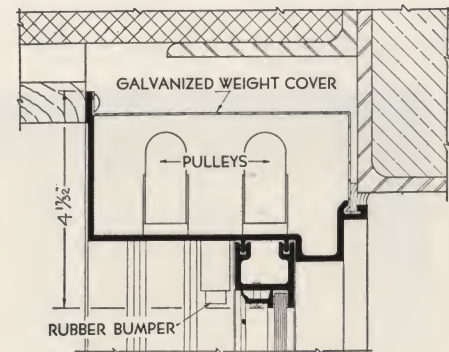
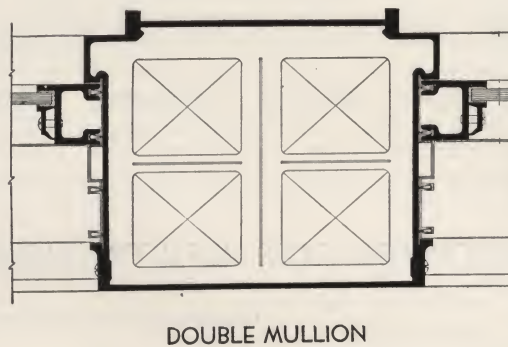
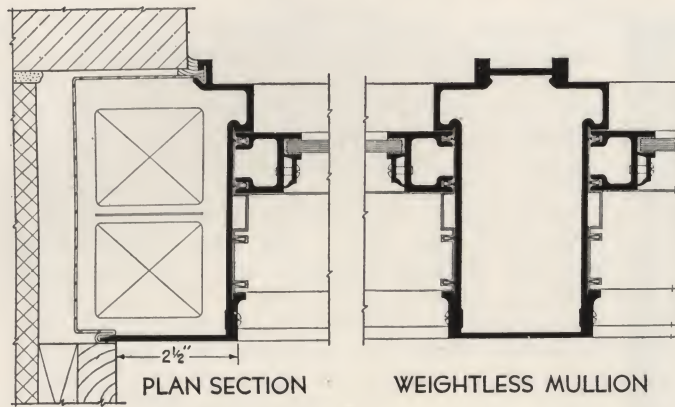
● **GLAZING**—Glazing is not included under this heading but is called for under the heading "Glass and Glazing." Glazing Contractors shall back putty all glass and block same if necessary. All sash shall be designed to allow glazing from the inside of the building. Glass shall be secured in place with glazing mouldings of the same material as the window, mitered at the corners and fastened with machine screws of the same material.

● **HARDWARE**—Sliding sash shall be counter-balanced with metal weights. Pulley housings and wheels shall be malleable gray cast iron with stainless steel axle and thrust washers. Pulleys and housings shall be removable as a unit. Sliding sash shall be hung on zinc coated steel sash chains having a tensile strength of at least 425 lbs. Chain attachments shall develop the full strength of the chains. Two lifts shall be provided on the bottom rail of the lower sash and a cam action fastener at the center of the meeting rails. A pole ring shall be provided on the top rail of upper sash for pole operation.

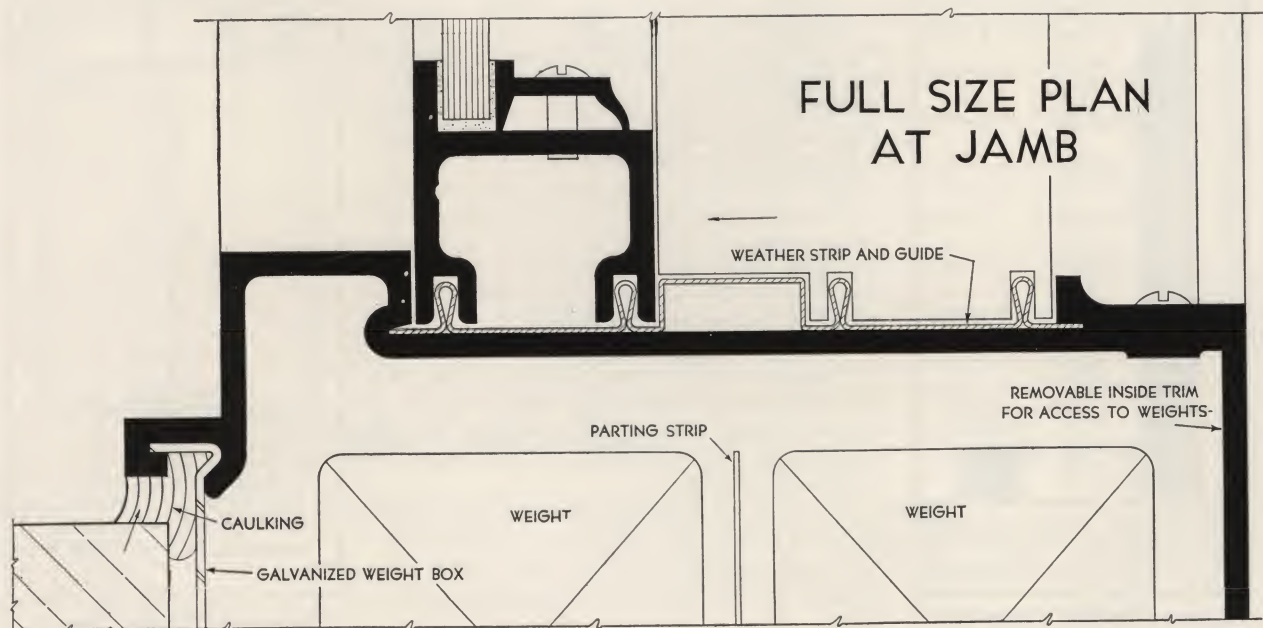
● **FINISH**—All frames and sash shall have a fine satin finish unless otherwise specified.

● **INSTALLATION**—All windows shall be installed by the manufacturer or under his supervision after the walls are built. Steel anchors shall be provided at heads and jambs of frames anchored to masonry with machine bolts and expansion sleeves or toggle bolts. Steel anchors shall be painted or cadmium plated. Before leaving the factory the windows shall be coated with a protective coating as a precaution against damage to finish in transit and during erection. After installation this protective coating shall be removed and all metal work cleaned as directed. Grouting and caulking are specified under another heading.

HEAVY SEALAIR WEIGHT-HUNG WINDOWS ASSEMBLY DETAILS



TYPICAL VERTICAL SECTION



TYPICAL SEALAIR HARDWARE



LEFT

Partial elevation of casement showing positive stay adjustor and lower sash with regular hinges, handle and strike



RIGHT

Partial elevation of casement showing transom with regular hinges and transom catch



LEFT

Extension Hinge

RIGHT

Outswinging Casement Handles and Strikes



All Hardware Can Be Furnished in Satin or Polish Finish as Desired

HEAVY SEALAIR CASEMENT WINDOWS



ISB



IST



OBT



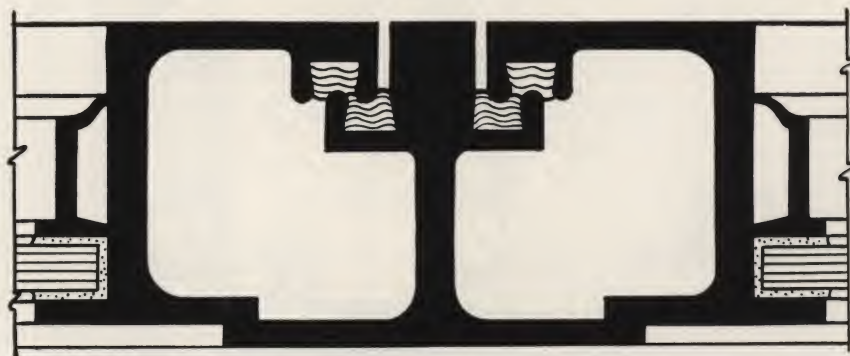
OST



OSB

STANDARD TYPES

Sizes Optional Within Reasonable Economic Limits



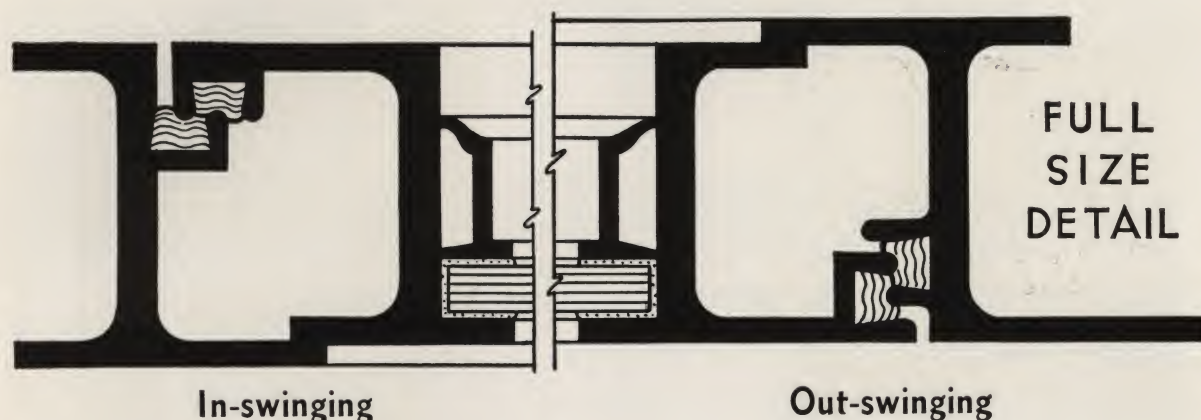
FULL SIZE MULLION IN-SWINGING TYPE

Out-swinging Type Similar



HEAVY SEALAIR CASEMENT WINDOWS

TYPICAL DETAIL OF SIDE JAMB SECTION



Specifications

● **CASEMENT WINDOWS** shall be Kawneer Heavy Sealair Casement Windows as made by The Kawneer Co., Niles, Mich.

● **MATERIALS**—The bronze or aluminum metal used shall be of standard commercial alloys and the best obtainable for the purpose. All members shall be solid extruded sections with all faces, sections and arrises true and in alignment so designed as to give the same masonry and sight lines. Glass shall be in the same vertical plane within the tolerance of $\frac{1}{8}$ ".

● **CONSTRUCTION**—Sections forming the frames shall be accurately coped or mitered at the corners and intersections; then welded solid along the entire line of contact, or milled to a hair line joint, tenoned, riveted and welded on the unexposed side. Corner joints of ventilator frames shall be accurately mitered and welded solid along the entire line of contact. Muntin intersections shall be securely interlocked, coped or mitered on the face and tenoned or riveted. Surplus metal at welds shall be dressed smooth on exposed and contact surfaces. Windows with sub-frames shall be fastened thereto every 24 inches with aluminum screws concealed when the sash are closed. Windows without sub-frames shall be set in prepared wall opening with water-tight bearings at sills and at least $\frac{5}{8}$ " overlap against returns.

● **WEATHERING**—Windows shall be weatherproof, dust-proof and rattleproof. Hinges shall provide a continuous three-point contact. There shall be at least two metal to felt contacts all around the sash. When both of these contacts are provided on one side (outside or inside) there shall be a positive metal to metal contact at least $\frac{1}{8}$ " wide all around the opposite side. Felt shall be all wool, especially prepared to give maximum resiliency and treated to prevent deterioration due to vermin, moisture or exposure. Felt shall be at least $\frac{1}{4}$ " felt in cross section and protected against distortion or displacement by dovetailed grooves in the section. The contacts shall be so designed that interlocking action occurs before contact is established between the metal and felt. A metal drip bar shall be attached on the outside of the lower rail on all in-swinging sash that are top or side hung. Weep holes shall be provided in the horizontal bars between each sash and at the sill of the windows for drainage. A continuous integral weather baffle shall be provided on sills and horizontal bars.

● **GLAZING**—Glazing is not included here. Glazing Contractors shall back putty all glass and block same if necessary. All sash shall be designed to allow glazing from the inside secured with glazing mouldings mitered at the corners and fastened with machine screws.

● **HARDWARE**—Extension hinges shall be used on side-hinged ventilators whenever the exterior face of the glass cannot be completely cleaned from the inside. Single side hinged ventilators shall each have a sill adjuster, two hinges and locking handle with beveled strike or keeper. Ventilators more than 5'0" high shall have three butts or hinges and a locking handle of the double throw type. Where the center of a ventilator is located more than 6'3" from the floor, a double throw locking handle shall be furnished. Hinged transoms and hoppers hung at bottom to open inward shall have spring catch or locking handle and friction side stays. Butts shall be half surface type with five knuckles and fast pins. Butts used on side-hinged ventilators shall be not less than 3½" high; on top or bottom hinged transoms and hoppers, not less than 3". Extension hinges shall be ample strength to permanently support the glazed ventilator without twist or sag. Locking handles shall be of the pivoted lever type. Single-throw locking handles shall lock the ventilator at one point. Double throw locking handles shall have the two locks connected by a bar not less than one-half the height of the ventilator in length. Sill adjusters shall be of the thumb screw or adjustable sliding friction type holding ventilator open at any angle up to 90 degrees.

● **FINISH**—All frames and sash shall have a fine satin finish unless otherwise specified.

● **INSTALLATION**—All windows shall be installed by the manufacturer or under his supervision after the walls are built. Steel angle anchors shall be provided at heads and jambs of frames, anchored to the masonry with machine bolts and expansion sleeves or toggle bolts. They shall be painted or cadmium plated and where used in connection with aluminum they shall be painted a heavy coat of bituminous paint. Windows shall be coated with a protective coating. After installation this protective coating shall be removed and all metal work cleaned as directed. Grouting and caulking are specified under another heading.

★ RUSTLESS METAL DOORS



U. S. Post Office, Cincinnati, Ohio; Samuel Hannaford & Sons, Architects

WELDED TUBULAR DOORS

These doors are fabricated from seamless tubes of solid bronze or aluminum alloy. The corners are welded to provide maximum strength and rigidity. Glazing mouldings are extruded in two types in harmony with the lines of the door and jambs . . . Kawneer Doors are custom-built, single or double acting, in various tube sizes . . . Transom designs can be varied as desired and either Tubular or Flush-Type construction may be used. Jambs are furnished in two types, each with two methods of anchoring . . . Kick Plates may be mounted on the surface or recessed to form panel. Kick Plates, Push Plates, Push Bars, Grilles, Louvers and other accessories are cast or fabricated in careful accordance with the architect's designs . . . Doors are fitted and hung to frame, hardware applied and the complete unit furnished ready to install.

FLUSH-TYPE DOORS

Possibilities for variation of style and design are many with this versatile construction which has found wide usage in public and institutional buildings . . . These doors can be built in both single and double acting types. Surfaces may be entirely flush or with panels, grilles or louvers . . . Transom designs can be varied as desired and either Tubular or Flush-Type construction may be used, depending upon the design. Jambs are furnished in two types, each with two methods of anchoring as shown . . . Kick Plates may be mounted on the surface or recessed to form panel. These, together with Push Plates, Push Bars, Grilles, Louvers and other accessories are cast or fabricated in careful accordance with the architect's designs . . . Doors are fitted and hung to frame, hardware applied and the complete unit furnished ready to install.

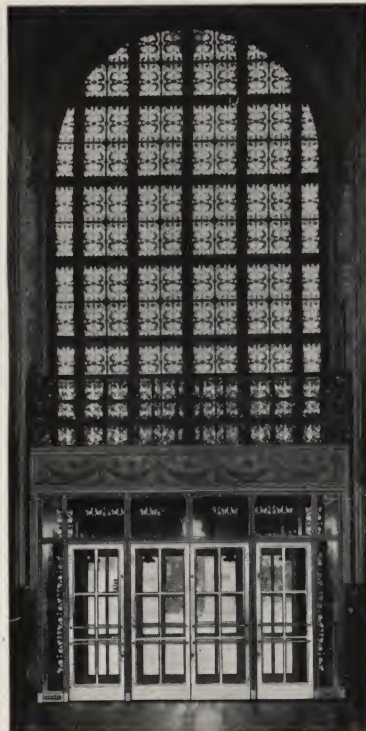
TYPICAL KAWNEER METAL DOORS



Walden Book Shop, Chicago, Illinois



U. S. Post Office, Norfolk, Virginia; Mitchell, Rudolph, Cooke & VanLeeuwen, Architects



American Trust and Banking Company,
Chattanooga, Tennessee



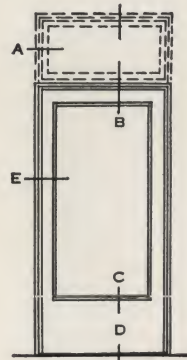
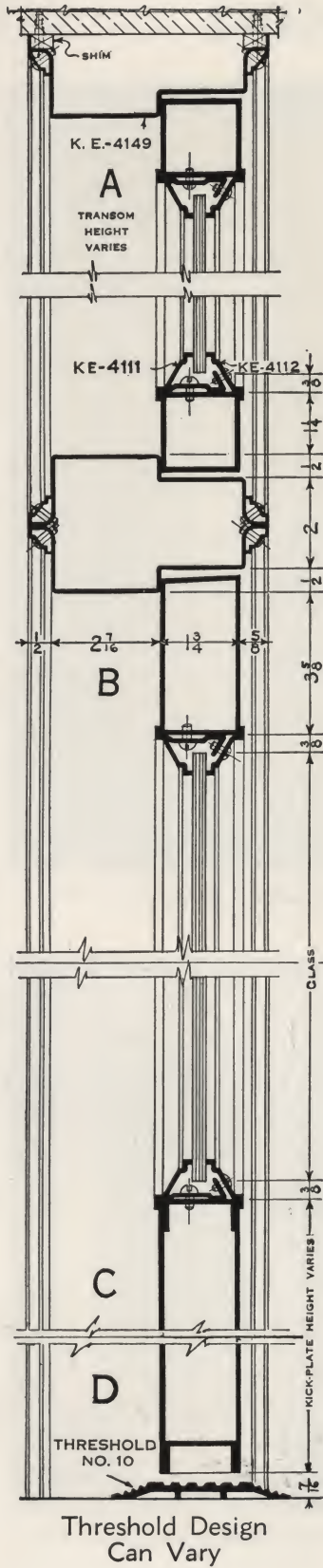
Sears, Roebuck & Company Store, Chicago.
Nimmons, Carr & Wright, Architects



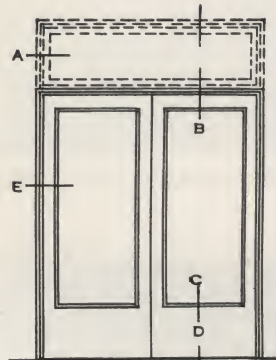
Door for Shop Front on Long Island, N. Y.

WELDED TUBULAR DOORS

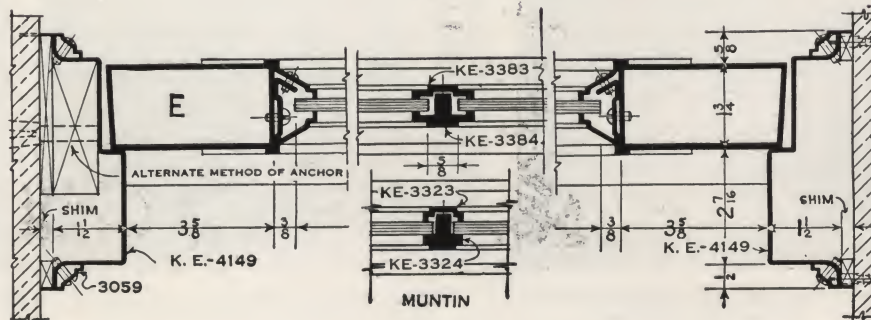
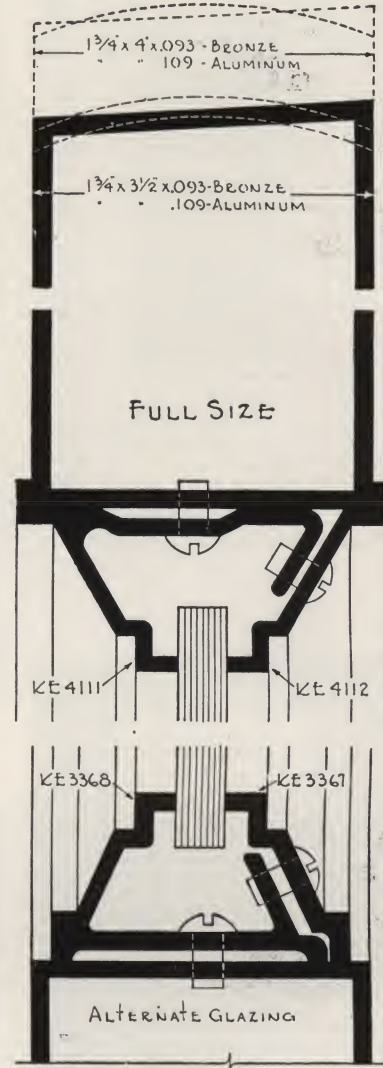
Full Size and 3-inch Scale Details



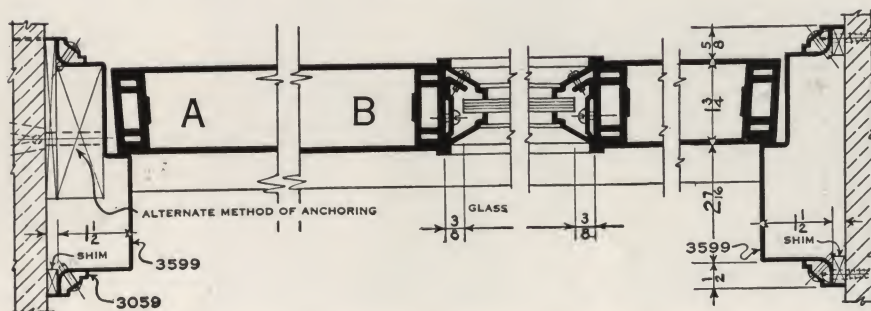
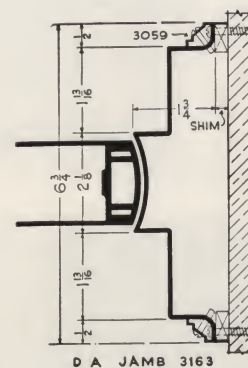
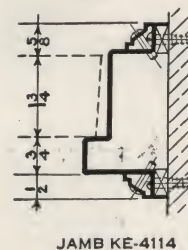
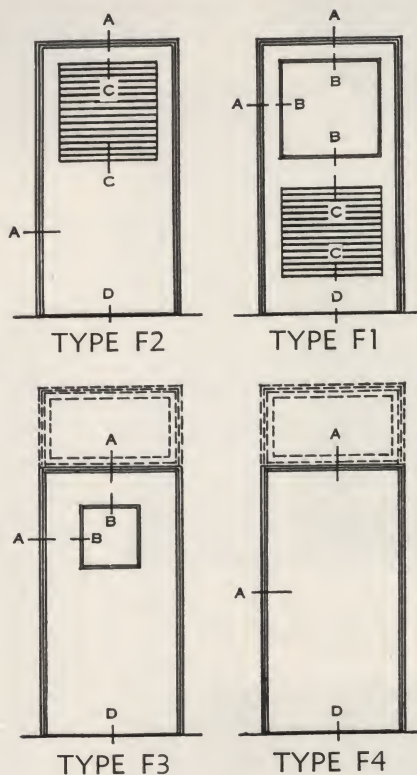
TYPE A
Type B With Transom



TYPE D
Type C With Transom



ROUND EDGE BEVEL EDGE ASTRAGAL KE-4120



★ ORNAMENTAL METAL

Extruded, Wrought, Cast, Hollow Metal.

THE KAWNEER COMPANY, COLEMAN BRONZE DIVISION, 336 West 37th Street, CHICAGO, ILL.



KAWNEER BRONZE TABLETS AND CASTINGS



The Coleman Bronze Division of The Kawneer Company is located in Chicago where it operated for many years as the Adelbert E. Coleman Bronze Company. This plant is extremely well equipped for handling any form of ornamental metal work and operates a large modern foundry and a completely equipped iron shop in addition to its bronze fitting shop.

The combined facilities of The Kawneer Company and the Coleman Bronze Division enable Kawneer to offer expert service on any type of ornamental metal work, whether cast, wrought, extruded or hollow metal.

RECENT INSTALLATIONS

- University of Texas, Austin, Texas (Bronze Windows)
- Robert Leon White and Paul P. Cret, Architects
- Cermak Pumping Station, Chicago, Illinois (Aluminum Windows & Ornamental Metal)
- Bureau of Architecture, Department of Public Works, Architects
- United States Post Office and Court House, Columbus, Ohio
- Richards, McCarty & Bulford, Architects
- Boulder Dam (Cast Aluminum Spandrels & Windows)
- University Housing Project, Atlanta, Georgia
- Edwards & Sayward, Architects and Robert B. Logan, Associate
- United States Post Office, Rochester, New York
- Gordon & Kaelber, Architects
- William Wrigley, Jr. Memorial, Catalina Island, California
- Bennett, Parsons & Frost, Architects
- Clay County Court House, Liberty, Missouri
- Wight & Wight, Architects
- United States Post Office and Court House, Binghamton, New York
- Conrad & Cummings, Architects
- Mausoleum Temple Beth Israel, Houston, Texas
- Joseph Finger, Architect
- International Amphitheatre, U. S. Yards, Chicago, Illinois
- A. Epstein, Architect and Engineer
- Pottawatomie County Court House, Shawnee, Okla.
- A. G. Davis & Son, Architects
- George Rogers Clark Memorial, Vincennes, Indiana (Tablet)
- Bennett, Parsons & Frost, Architects
- East Liberty Presbyterian Church, Pittsburgh, Pa. (Bulletin Board)
- Cram & Ferguson, Architects
- Marshall Field & Company Annex, Chicago, Illinois (Tablets)
- Federal Reserve Bank, Philadelphia, Pa.
- Paul Philippe Cret, Architect
- Post Office Department Building, Washington, D. C.
- Delano & Aldrich, Architects
- City Hall & Court House, St. Paul, Minn.
- Ellerbe & Company, Architects
- Holabird & Root, Associate Architects
- Indiana Bell Telephone Building, Indianapolis, Indiana
- Vonnegut, Bohn & Mueller, Architects
- United States Post Office and Custom House, St. Paul, Minn.
- Lambert Bassindale, Architect
- Holabird & Root, Associate Architects
- United States Post Office and Court House, Norfolk, Va.
- B. F. Mitchell and Rudolph, Cooke & Van Leeuwen, Associate Architects
- United States Post Office, Cincinnati, Ohio
- Samuel Hannaford & Sons, Architects
- United States Post Office, Hartford, Conn.
- Malmfeldt, Adams & Prentice, Architects

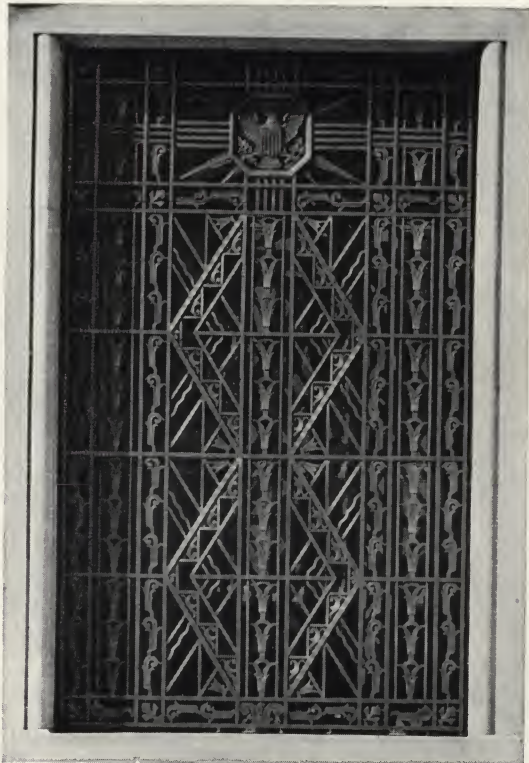
TYPICAL KAWNEER ORNAMENTAL METAL WORK



Bronze Gates for Post Office Department Building,
Washington, D. C.
Delano & Aldrich, Architects



Bronze Check Desk, Counter Screens and Railing for Northern Trust Co.,
Chicago, Illinois



Bronze Grille, United States Post Office, Cincinnati, Ohio
Samuel Hannaford & Sons, Architects



Aluminum metal work for Beverly
Theatre, Chicago, Illinois



Cast aluminum spandrel, 13 feet high,
for Boulder Dam

Details below



Kawneer

WINDOWS • DOORS
ARCHITECTURAL
METAL WORK

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